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[illegible]

Group Art Unit: 2765
Examiner: J. Patel
For: A DELIVERY MANAGING SYSTEM

Box: Patent Application
Assistant Commissioner of Patents
Washington, D.C. 20231

This is a request for filing a divisional application under 37 C.F.R. 1.53(b) of pending prior application Serial No. 08/975,227, filed on November 21, 1997, entitled A DELIVERY MANAGING SYSTEM, by the inventor named in the prior application.

1. Enclosed is a copy of the prior application, including the Declaration as originally filed.
2. The Filing Fee is calculated below:

CLAIMS AS FILED IN THE PRIOR APPLICATION
LESS ANY CLAIMS CANCELED BY AMENDMENT BELOW

Basic Fee							\$	690.00
Total Claims	3	-	20	=	0	x	18	= \$ 0.00
Independent Claims	3	-	3	=	0	x	78	= \$ 0.00
Total Filing Fee							\$	690.00

3. A check including the amount of \$690.00 is enclosed to cover the Filing Fee.

4. Cancel claims 3 and 5-21 before calculating the Filing Fee.

5. The Commissioner is hereby authorized to charge any additional fees which may be required, or to credit any overpayment, to Deposit Account No. 02-1540. A duplicate copy of this Request is enclosed for this purpose.

6. Amend the specification by inserting, before the first line:

--This is a divisional application of U.S. Serial No. 08/975,227, filed November 21, 1997.--.

7. New drawings are enclosed, fifteen (15) sheets, Figs. 1-19.

8. The power of attorney is set forth in the Declaration in the prior application or an associate power of attorney is hereby granted to:

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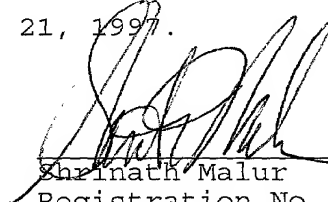
9. The prior application is assigned to Hitachi, Ltd.

10. Priority of the following Japanese patent application is claimed under 35 U.S.C. § 119:

No. 8-317438, filed November 28, 1996.

The certified priority document has been filed in the parent application, Serial No. 08/975,227.

The undersigned hereby declares that no matter contained in the specification, including the claims, and drawings filed in the present divisional application would have been new matter in the prior application Serial No. 08/975,227, as originally filed on November 21, 1997.


Shrinath Malur
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Date: February 28, 2000

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Accompanying Divisional Application under 37 CFR 1.53(b):

Prior Application: G. TSUKUDA
Serial No. 08/975,227
Filed: November 21, 1997

Group Art Unit: 2765
Examiner: J. Patel
For: A DELIVERY MANAGING SYSTEM

PRELIMINARY AMENDMENT

Assistant Commissioner of Patents
Washington, D.C. 20231

Sir:

Prior to examination, please amend the above application as follows.

IN THE SPECIFICATION

Please amend the specification as set forth below.

Page 1, line 8, change "she/he bought it" to --purchased--;

line 9, delete "such as";

line 10, after "system" insert --, or the like--;

line 12, change "widely spreading" to --the widespread
use--;

line 13, change "such an" to --the-- and change "and
so on" to --etc.--;

line 15, after "in" insert --the--;

line 16, change "whose" to --in which--;

line 17, change "go out for" to --work at--, change
"such" to --the-- and delete "has been increased--; and
line 19, change "house. And, it" to --house is
increased. This--.

Page 2, line 3, change "dissolving" to --resolving--.

Page 3, line 21, change "the" to --a--.

Page 4, line 16, change "notices" to --notify--; and
line 17, change "is the comedies" to --are
commodities--.

Page 5, line 6, change "dissolving" to --overcoming--.

Page 6, line 24, change "a store-in" to --an arrival--.

Page 7, line 2, change "store-out" to --departure--;
line 14, change "store-in" to --arrival--; and
line 19, change "store-out" to --departure--.

Page 9, line 8, change "differs" to --differ from--.

Page 12, line 4, change "aria" to --area--;
line 23, change "noticed" to --notified--; and
line 24, change "noticing" to --notifying--.

Page 15, line 13, change "noticed" to --notified--;
 line 17, change "noticed" to --notified--; and
 line 24, change "noticed" to --notified--.

Page 16, line 1, change "noticed" to --notified--;
 line 21, change "noticed" to --notified--; and
 line 24, change "noticed" to --notified--.

Page 17, line 2, change "noticed" to --notified--;
 line 3, change "noticed" to --notified--;
 line 4, change "noticed" to --notified--; and
 line 21, change "convayable" to --conveyable--.

Page 18, line 4, change "convayable" to --conveyable--;
 line 8, change "notice" to --notification--, change
 "store-in" to --arrival-- and after "goods" insert --into the
 store--; and
 line 9, change "distributor" to --distribution--.
 line 23, change "store-in" to --arrival--; and
 line 25, change "store-in" to --arrival--.

Page 19, line 1, change "noticed" to --notified--;
 line 4, change "store-in" to --arrival-- and change
 "noticed" to --notified--;
 line 6, change "is" to --has--;

line 7, change "stored-in" to --arrived-- and change "noticed" to --notified--;

line 10, change "store-out" to --departure of the goods--;

line 13, change "store-out" to --departure-- and change "noticed" to --notified--; and

line 15, change "convayable" to --conveyable--.

Page 20, line 2, change "store-out" to --departure--;

line 5, change "store-out" to --departure--;

line 9, change "store-out" to --departure--;

line 13, change "store-out" to --departure--;

line 16, change "stored-out" to --has departed--; and

line 22, change "store-in" to --arrival--.

Page 21, line 1, change "store-out" to --departure--;

line 2, change "store-out" to --departure--;

line 14, change "store-in" to --arrival--;

line 18, change "store-out" to --departure--; and

line 19, change "store-out" to --departure--.

Page 25, line 6, change "store-in" to --arrival--.

Page 26, line 5, change "stored-in" to --arrived--; and

line 7, change "store-in" to --arrival--.

Page 27, line 9, change "store-out" to --departure--.

IN THE ABSTRACT

Please cancel the Abstract and substitute therefor the Abstract of the Disclosure on the attached separate sheet.

IN THE CLAIMS

Please cancel claims 3 and 5-21 and amend claims 1, 2 and 4 as set forth below.

1. (Amended) A distribution server [delivery managing system] for managing delivery of a delivery goods from [a distribution center through] an agent to a receiver, comprising;

means for inputting [a client for providing at least] a schedule information of the receiver;

means for providing [a distribution server for providing at least] a delivery schedule [information] and for managing delivery of the delivery goods on the basis of said delivery schedule;

means [an agent server] for managing commission on the delivery goods by the agent;

[a data transmission network, through which said client, said agent server and said distribution server are connected to one another;]

means for determining date and time for delivery of the delivery goods[, alternatively,] and for deciding the agent

to be used[, between said client and said distribution server];
and

means for notifying of arrival and departure [noticing
of store-in and/or store-out] of the delivery goods to and [into
and/or] from the agent to the receiver [at least one of said
distribution server and said client].

2. (Amended) A delivery managing system for managing
delivery of a delivery goods from [a distribution center
through] an agent to a receiver, comprising:

[a client for providing at least a schedule
information of the receiver;]

a distribution server for providing [at least] a
delivery schedule [information] and for managing delivery of the
delivery goods on the basis of said delivery schedule;

an agent server for managing commission on the
delivery goods by the agent;

a data transmission network[, through which said
client, said agent server and] for connecting said distribution
server and said agent server [are connected] to one another;

means for determining date and time for delivery of
the delivery goods[, alternatively,] and for deciding the agent
to be used[, among said client, said distribution center and
said agent server]; and

means for notifying of arrival and departure [noticing
of store-in and/or store-out] of the delivery goods to and [into

and/or] from the agent to the receiver [at least one of said distribution server and said client].

4. (Amended) A delivery managing system for managing delivery of a delivery goods from a distribution center through an agent to a receiver, comprising:

[a client for providing at least a schedule information of the receiver;]

a distribution server for providing [at least] a delivery schedule [information] and for managing delivery of the delivery goods;

an agent server for managing commission on the delivery goods by the agent;

a data transmission network, through which a [said] client, said agent server and said distribution server are connected to one another; [each other; and]

means for requesting a schedule information to said client;

means for receiving said schedule information from said client;

means for determining date and time for delivery of the delivery of goods[, alternatively,] and for deciding the [an] agent to be used, between said client and said distribution server [and said client];

means for notifying at least one of said determined data and time for delivery and the agent to said client; and

means for notifying of arrival and departure of the delivery goods to and from the agent to at least one of said distribution server and said client.

REMARKS

Claims 3 and 5-21 have been canceled, and claims 1, 2 and 4 have been amended. Accordingly, claims 1, 2 and 4 are currently pending in the application.

The specification and Abstract have been amended as in the parent application to remove any minor grammatical or idiomatic informalities. No new matter has been added.

Examination is respectfully requested.

Respectfully submitted,



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Attorney for Applicant

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Date: February 28, 2000

ABSTRACT OF THE DISCLOSURE

A delivery managing system for managing delivery of goods from a distribution center through an agent to a receiver is disclosed. A client provides at least schedule information of the receiver. A distribution server provides at least delivery schedule information and manages delivery of the goods. An agent server manages the commission on the goods by the agent. A data transmission network interconnects the client, the agent server and the distribution server. A means for determining the date and time for delivery of the delivery goods is provided, as well as for deciding the agent to be used, between said client and said distribution server. Also, a means for notifying of arrival and/or departure of the goods to and/or from the agent to at least one of the distribution server and said client is disclosed.

6650
NIT-84

United States Patent Application

Title

A DELIVERY MANAGING SYSTEM

Inventor

Gunji TSUKUDA.

SPECIFICATION

TITLE OF THE INVENTION

A DELIVERY MANAGING SYSTEM

BACKGROUND OF THE INVENTION:

5 FIELD OF THE INVENTION

The present invention relates to a system for supporting delivery of purchased goods or commodities from a distribution center to a purchaser when she/he bought it through such as an on-line shopping service and/or a mail
10 order system.

DESCRIPTION OF PRIOR ART

With widely spreading of an on-line shopping service through such an Internet and so on, demand for delivery services is expected to increase more than ever before. On
15 the other hand, because of increase in average age of marriage, as well as in the number of families whose both parents go out for jobs, such possibility has been increased that the purchaser is absent from home when the delivery service visits at her/his house. And, it causes a problem
20 that the distributor must deliver it again, thereby increasing the cost of delivery service. Also, it causes another problem for the purchaser that she/he cannot easily or quickly receive the commodities or goods that she/he bought. Therefore, for both the distributor and the
25 purchasers, it is very important object to realize and to

establish a smooth delivery system of the purchased commodities or goods, at the present as well as in the future.

For dissolving such problems, there was already known a technology with which the delivery of the commodities or goods can be done even in an instance of absence of family members at home. For example, in accordance with a conventional technology, a delivery box is provided for each family at the entrance of the house thereof, and only the distributor is informed of an identification number or code of the delivery box thereby prohibiting or protecting the box from being opened by the persons other than the distributor so as to maintain the security thereof (Japanese Patent Laying-Open No. Hei 02-1051572). Or, there was also known a technique in which, in a common place of a condominium is provided a delivery locker for common use, in which a plurality boxes are provided, thereby enabling the delivery of commodities or goods to be delivered for each room of the condominium (Japanese Patent Laying-Open No. Hei 06-270992). However, hereinafter, a block for storing or receiving a single commodities or goods therein is called "a box", and a structure having one or more of such boxes is called "a delivery locker" as a whole.

As an another means for dissolving the problem mentioned above, there was also known a method, in which the distributor automatically registers data about date and

time when the resident of address to be delivered wishes to receive the goods into a data base thereof through push buttons when receiving an information through a telephone from the resident on the desired date and time for delivery service. And, using this data, the chance of delivering to the residence in absence can be reduced (Japanese Patent Laying-Open No. Hei 05-165847). In accordance with this method, it is further described that the tendency of the resident(s) to stay at home on day and time can be detected by storing the data about date and time when the resident(s) of that address wishes to receive, therefore, even if there is no information from the receiver or addressee in a certain case of delivery of the goods, the chances of delivering at the residence in absence can be reduced by using that tendency.

SUMMARY OF THE INVENTION

As is apparent from the above, it is possible to achieve home deliver service of commodities or goods even in absence of the purchaser by using the delivery box of the conventional technology. However, it is still difficult to provide such the delivery box in front of every house and such the common delivery locker in the common place for every condominium, from a view point of spaces.

Further, if being provided such the common delivery locker in the common place of the condominium, there is still

a problem in the conventional technology mentioned above,
i.e., of forgetting to receive the delivered commodities.
For the distributor side, since it is impossible to check
whether the delivered commodities which is received in the
5 delivery box is taken out therefrom or not, it is also
impossible to make a confirmation of receipt by the resident
of the addressee. In other words, it is still impossible
to follow up the receipt by the resident of the address of
the delivery goods.

10 Further, in the method for reducing the chance of
delivery to the absent residence by using the information
of desired date and time for the delivery service in
accordance with the conventional art, it is necessary for
the resident of the address to know that there is commodities
15 or goods to be delivered to her/him. For this reason, the
distributor must previously notices the resident of the
address that there is the comedies or goods to be delivered
to her/him, by using such as a telephone call or a card for
absentee. This also comes to be a considerable burden for
20 the distributor. Further, the tendency detected from the
stored data of the desired date and time for delivery can
only indicate that the resident stays at home accidentally
on a certain date and time of a day of a week, only up to
that time. Therefore, even in the case that it is delivered
25 on the detected date and time of high possibility for the

resident to stay at home, the possibility of absence is still high, and there is still remained a lot of possibility that the purchased commodities could be delivered earlier than that detected date and time.

5 Thereby, an object of the present invention is, for dissolving the problems in the prior art mentioned above, to provide a smooth delivery system from the distributor to the purchaser of the commodities or goods which is purchased through the on-line shopping service and so on.

10 For accomplishing the object mentioned above, in accordance with the present invention, there is provided means for determining scheduled date and time for delivery of the purchased commodities or goods, from a schedule information of a delivery information of each area of the distributor and a schedule information of the purchaser.

15 Further, there is provided means for determining that the delivery of the commodities or goods is to be conducted through an agent, on a basis of an information of a standard for using an agency, in relation with the commodities or goods to be delivered.

20 Further, in case that the commodities or goods is decided to be delivered from the distributor to the purchaser through an agency, there is provided means for detecting the commodities or goods that has been kept in the agent

25 in long time.

Brief Description of the Drawings:

Fig. 1 shows a functional construction diagram of a delivery managing system in accordance with a first embodiment of the present invention;

5 Fig. 2 shows a hardware construction of each server of the above delivery managing system;

Fig. 3 shows an example of a delivery information used in the above delivery managing system;

10 Fig. 4 shows an example of a delivery goods information used in the above delivery managing system;

Fig. 5 shows a detailed processing flow of a step of noticing of a list of available date for delivery in the above delivery managing system;

15 Fig. 6 shows an example of a schedule information used in the above delivery managing system;

Fig. 7 shows an example of a purchased goods information used in the above delivery managing system;

20 Fig. 8 shows a detailed processing flow of a step of registering a scheduled date for delivery in the above delivery managing system;

Fig. 9 shows an example of a commissioned goods information used in the above delivery managing system;

25 Fig. 10 shows a detailed processing flow of a step of a store-in of an agent server in the above delivery managing system;

Fig. 11 shows detailed processing flow of a step of a store-out of the agent server in the above delivery managing system;

Fig. 12 shows a functional construction diagram of a delivery managing system in accordance with a second embodiment of the present invention;

Fig. 13 shows a hardware construction of an agent server of the delivery managing system shown in Fig. 12;

Fig. 14 shows an example of the delivery goods information used in the second embodiment mentioned above;

Fig. 15 shows an example of a locker information used in the second embodiment mentioned above;

Fig. 16 shows a detailed processing flow of a step the store-in of the agent server;

Fig. 17 shows an example of an information list of distributors in the delivery managing system of the second embodiment;

Fig. 18 shows a detailed processing flow of a step of the store-out of the agent server of the delivery managing system of the second embodiment; and

Fig. 19 shows a functional construction diagram of a delivery managing system in accordance with a third embodiment of the present invention.

DETAILED DESCRIPTION OF PREFERRED EMBODIMENTS:

Hereinafter, embodiments according to the present

invention will be fully explained by referring to the attached drawings.

Fig. 1 shows a functional construction diagram of a first embodiment of the present invention. In the present embodiment, there are provided a client and two (2) kinds of servers, including a distribution server and an agent server, and the client and the each server of those two servers is connected with an information transmission network, such as a telephone cable. However, those two (2) kinds of servers are respectively located in a plurality number thereof. In Fig. 1, a reference numeral 111 indicates an assembly of functions on the distribution server, 112 an assembly of functions on the client, and 113 an assembly of functions on the agent server. Reference numerals (1) through (4) attached to arrows in Fig. 1 indicate rough sequential order of procedures. In the embodiment of the present invention, the delivery of commodities or goods from a distributor to a receiver or an addressee is carried out after establishing a contract between the seller and the purchaser, in case of an on-line shopping. However, taking a case of gifts into consideration, the receiver or addressee who is primarily to be a client is not necessarily to be the purchaser.

The commodities or goods on which the contract was made, in the embodiment, is called by three kinds of names, for

example, "a delivery goods", "a commissioned goods", and
"a purchased goods". This is because of differences from
various view points, such as from a view point of the
distributor, a view point of the agent, and a view point
5 of the purchaser. However, when calling by names of
"delivery goods information", "commissioned goods
information" and "purchased goods information", they
differs one another in the contents of the information to
be used for management in respective standing points,
10 therefore they mean differently. Such a "Contract code",
which is a basic information for the delivery goods
information 122 and the purchased goods information 124,
and a "name of goods" is an information which was produced
when the contract was made, therefore they are treated as
15 if they have been already existing in the present embodiment.
However, if the purchaser differs from the receiver, there
is no purchased goods information for the client as the
receiver or addressee. In the delivery goods information
122, purchased goods information 124 and the commissioned
20 goods information 125, the same "contract code" means that
the same goods is treated. In the present embodiment, the
"contract code" is expressed by four (4) digits of numeral
number. However, in the sense of practical matter, since
each "contract code" must be unique from a whole of the
25 contracts, it may be in a form which includes a name of the

seller and so on therein.

Fig. 2 shows a hardware construction of each server.
As an input apparatus, there are included a bar-code reader,
an IC-card reader and so on other than a keyboard and a mouse.
5 As an output apparatus, there are included a bar-code writer,
an IC-card writer and so on other than a display and a
printer.

Hereinafter, detail of the first embodiment will be
explained with Fig. 1.

10 A step 101 is a step for notifying the personal
information server of a list of a schedule for delivery by
using the delivery information 121 and delivery goods
information 122.

An example of the delivery information 121 is shown
15 in Fig. 3 and an example of the delivery goods information
122 in Fig. 4. In case that a column 411 of the delivery
schedule is blanked, it means that there is not yet
determined the delivery schedule and the agent. If it is
filled with numerals, it means scheduled date and time, and
20 if it is filled with letters, it means the agent to be used.
In case that the column 412 of delivery condition is blanked,
it means that the delivery goods is located in the
distribution center. If it is filled with numerals, it
means the date and time of completion of the delivery, and
25 if it is filled with letters, it means that it is located

in the agent. In a column 413 of delivery goods arrival date, there is contained a scheduled date of arrival to the distribution center which is transmitted through the communication network, or a date when the goods is actually
5 carried into the distribution center. Compilation of the delivery information is necessary as a function on the distribution server. However, in the present embodiment, the delivery information is treated as if it has been already existing, therefore no explanation will be given on the
10 compilation function of the delivery information. The "contract code", "delivery address", "delivery goods" and "electronic address for delivery" of the delivery goods information are information which were produced when the seller and the purchaser made the contract, and they are
15 noticed or inputted from the seller.

The detailed flow of the step 101 will be shown in Fig.
5.

In a step 501, the delivery goods information is obtained, in which a column of scheduled date for delivery
20 is blanked. For example, such a delivery goods information 401 as shown in Fig. 4 is obtained.

In a step 502, a list of the scheduled date and time for delivery to the delivery address is obtained from the delivery addresses of the delivery goods information
25 obtained and the delivery information 121. For example, the

delivery address of the delivery goods information 401 is
"Utsukushigaoka" in Fig. 4, then the data 301 and 302 are
obtained that indicate date and time of starting and
completing of delivery service in the area "Utsukushigaoka"
5 as shown in Fig. 3.

In a step 503, the scheduled delivery date and time
obtained in the step 502 and the contract code of the delivery
goods are noticed to the electronic address for the delivery
in the delivery goods information 122. For example, in the
10 case of the delivery goods corresponding to the information
401 in Fig. 4, the contract code "1001" and the date and
time of starting/completing of delivery 301 and 302 in Fig.
3 are noticed to the electronic address "tsukuda@aaa.bbb".
In case that the purchaser is different from the receiver,
15 not only the information of the contract code but also an
information about the delivery goods is transmitted
thereto.

A step 102 is a step in which the schedule of date and
time for delivery is determined from the list of the
20 scheduled date and time for delivery which is received from
the distribution server, the schedule information 123 and
the purchased goods information 124, and the determined
schedule of date and time for delivery is noticed to the
distribution server functioning as a source of noticing
25 thereof.

An example of the schedule information 123 and that of the purchased goods information 124 are shown in Figs. 6 and 7, respectively. A storage 703 in Fig. 7 indicates a place where the purchased goods is kept in it. In the present embodiment, the schedule information 123 is treated as if it has been already existing. Although the compiling function of the schedule information is necessary as an function on the client, it is out of the scope of the present invention. The "contract code" and the "purchased goods" of the purchased goods information are information which were produced when the seller and the purchaser made the contract, and "a standard for using an agency" and "an agent to be used" are the information which were set after the purchaser bought and made the contract.

The detailed flow of the step 102 mentioned above will be shown in Fig. 8.

A step 801 is a step of obtaining the earliest one of the scheduled date and time for delivery from a list of the scheduled date and time for delivery and the schedule information. For example, since delivery service with the starting/completing date and time for delivery 301 shown in Fig. 3 is impossible judging from the schedule information 601 shown in Fig. 6, and since there is no schedule during the period of 302, then the latter, i.e., the date and time of 302 in Fig. 3 is determined to be the scheduled date and

time for delivery (here, it is assumed that there is not yet existing the schedule information 602 in this time point). Actually, for determining as the scheduled time for delivery, it must be confirmed that the starting time of the scheduled
5 delivery is later than the time of the completion time of the schedule just before as well as taking the time for moving into the consideration. Further, there is necessity of confirming the relationship to the schedule of just after it, in the same manner. If there is no schedule information,
10 then it is treated as if there is not any schedule therein.

In a step 802, there is determined whether the goods should be delivered to the agent or to the delivery address. If the time interval between the day when it reaches at the distribution center and the available earliest scheduled
15 date is greater than the days defined in the standard for using agency 701 shown in Fig. 7, it is decided to use the agent, and then a step 803 is executed. If it is not so, then a step 804 is executed. For example, in the case of the delivery goods information 401 shown in Fig. 4, since
20 the standard for using an agency of the purchased goods information 705 of the contract code "1001" in Fig. 7 is "5 days", and since the interval between the date of arriving at distribution center 402 "960922(15)" and the earliest scheduled date for delivery "960925(15)" does not exceed
25 that 5 days, it is decided to be delivered to the delivery

address. In case that "no use" is described in the column of the standard for using agency 701 in Fig. 7, the number of the days of the standard is considered limitless. As other standards for using agency other than that, there are

5 cases of "impossible to deliver until \bigcirc th month, \times th day", "impossible to deliver after Δ days have been passed from the date of purchasing contract", "absent when delivered once", and so on. Further, with the delivered goods on which the standard for using agency is not described, it can be

10 considered that a default standard is used for it. With this, even when the purchaser of the goods is different from the receiver (a client), it is possible to use the agency.

In a step 803, the agent to be used is noticed to the distribution server as the source of the list of the

15 scheduled date and time for delivery. For example, in case of the goods of the contract code "1001" in Fig. 7, "agent X" in the column 701 is noticed to the distribution server from the purchased goods information 705.

In an arbitrary agent, the commission is not

20 necessarily available for all of goods. For example, it cannot deal with if the goods is larger than a certain size(s), or if there is no room for storing the goods to be commissioned. For that reason, a plurality of agents may be noticed to the distribution server.

25 In a step 804, as well as the earliest one of the

scheduled date and time for delivery is noticed to the distribution server as the noticing source of the list of the scheduled date and time for delivery, the scheduled date and time for delivery is registered into the schedule
5 information 123 and the purchased goods information 124. For example, as an schedule information relating to the contract code "1001", "starting date and time: 960925(16), completing date and time: 960925(18), place: home, contents: receiving of delivery goods" (602 in Fig. 6) is
10 registered into the schedule information 123, and "960925(16)" is registered into 704, as shown in Fig. 7.

In a step 805, the distribution server as the noticing source of the list of the scheduled date and time for delivery is registered into a storage 703 shown in Fig. 7 of the
15 purchased goods information 124 as the storage at the present.

A step 103 shown in Fig. 1 is a step in which the scheduled date and time for delivery from the client, or the agent to be used is registered into the delivery goods
20 information 122. For example, the scheduled date "960925(6)" 704 in Fig. 7, which is noticed in relation with the contract code "1001" is registered into a column 403 in Fig. 4. At this time, also an information of the delivery goods is noticed to the agent to be used, as the case may
25 be. When receiving a response that the agent cannot deal

with, then the notice is made to another agent. If all the agents is unavailable, it is noticed to the client. Further, if a plurality of agents were noticed, only the agent which is decided to be used is noticed to the client.

5 In case that the delivery of delivery goods is conducted by the agent, the delivery goods itself is transferred from the distribution center to the agent. In this time, an information relating to the delivery goods is inputted on a paper or into a IC-card as a conveyable
10 memory medium which can be attached therewith, by using the input apparatus including the bar-code reader, the IC-card reader and so on. If the information of the delivery goods was already noticed to the agent server through the communication network, a confirmation of the purchased
15 goods will be done by comparing the purchased goods information through the network and that inputted through the input apparatus.

 In a step 104 in Fig. 1, the information of the delivery goods to be transferred to the agent is outputted as a line
20 of letters or in a form of the bar-code on the paper, or outputted into the IC-card as the conveyable medium. The information to be outputted includes the electronic address of the distributor.

 In the step 105 in Fig. 1, in order to receive the
25 purchased goods which is completed to be delivered to the

agent, the information of the purchased goods is also outputted as a line of letters or in a form of the bar-code on the paper, or outputted into the IC-card as the conveyable medium.

5 A step 106 in Fig. 1 is a step, in which the purchased goods information inputted from the input apparatus is registered into the agent information 125 shown in Fig. 9, and a notice of store-in of the goods is given to the distributor server and the client relating to it. For
10 inputting, the bar-code or the card which are produced in the step 104 can be used. In this time, the delivery of the goods from the distributor to the agent is done.

The detailed processing flow of the step 106 will be given with reference to Fig. 10.

15 In a step 1001 in Fig. 10, the information inputted from the input apparatus is registered into the commissioned goods information 125. For example, in case that the information inputted from the input apparatus is "contract
20 distributor: info@a-butu.co, electronic address of purchaser: tsukuda@aaa.bbb" as shown in Fig. 9, the day when those information are inputted is treated as the day of store-in so as to set the commissioned goods information 901.

25 In a step 1002, the store-in of the delivery goods into

the agent is noticed to the distribution server. For example, in the case of the commissioned goods information 901 shown in Fig. 9, the identification number "2529" and a flag of the store-in are noticed to the address
5 "info@a-butu.co" of the distributor.

In a step 1003, the fact that the delivery goods is stored-in to the agent is noticed to the client, in the same manner as in the step 1002 mentioned in the above.

A step 107 in Fig. 1 is a step, in which the date of
10 store-out is registered into the commissioned goods information 125 by using the contract code of the commissioned goods, which is inputted from the input apparatus, and the store-out of the goods is noticed to the distribution server and the client relating thereto. For
15 inputting, the bar-code or the IC-card as the conveyable medium which are produced in the step 105 can be used. In this time, the delivery from the agent to the purchaser is done.

The detailed processing flow of the step 107 will be
20 given with reference to Fig. 11.

A step 1101 is a step, in which it is decided or checked whether there is any agent coincident with that being identified in the contract code which is inputted from the input apparatus.

25 A step 1102 is a step, in which the date when the

contract code is inputted from the input apparatus is registered into the column of the date of store-out of the commissioned goods information relating to the contracting code. For example, in case that the contract code "2529" is inputted, a date is set in the column of the store-out of the commissioned goods information 901, as is shown in Fig. 9.

In a step 1103, the fact that the delivery goods is put out or store-out from the storage of the agent is noticed to the distribution server from the agent. For example, in the case of the commissioned goods information 901 shown in Fig. 9, the identification number "2529" of the delivery goods and the store-out flag is noticed to the address of the distributor, i.e., "info@a-butu.co".

In a step 1104, in the same manner as in the step 1103, the fact that the delivery goods is put out or stored-out from the storage of the agent is noticed to the client.

A step 108 is a step, in which the delivery goods information is renewed on the basis of the information noticed from the agent server. In case that the information noticed from the agent server includes the contract code and the store-in flag, "agent" is registered into a column of delivery condition of the delivery goods information 122 which relates to the contract code. In the other case that the information noticed from the agent server includes the

contract code and the store-out flag, the date of the store-out is registered into the column of the delivery condition of the delivery goods information which relates to the contract code. In more detail, in the step 108, in
5 case that the information of completion of delivery of the goods which is directly delivered to the address is inputted, the date and time of the delivery is also registered into the column of the "delivery condition" of the delivery goods information 122 shown in Fig. 4.

10 A step 109 is a step, in which the purchased goods information 124 is renewed on the basis of the information noticed from the agent server. In case that the information noticed from the agent server includes the contract code and the store-in flag, the name of the agent is registered
15 into a column of the "storage" of the purchased goods information 124 which relates to the contract code. In the other case that the information noticed from the agent server includes the contract code and the store-out flag, as shown in Fig. 7, the date of the store-out is registered into the
20 column of the "storage" of the delivery goods information 124 which relates to the contract code.

A step 110 is a step for detecting an abnormal condition of the delivery goods. For example, it detects such the delivery goods located in the agent, of which the purchaser
25 does not come to receive it although several days have

already passed-by. In the present embodiment, the step 110 functions as one of those on the distribution server, however, the step 110 can be carried out on the client or the agent server other than that mentioned in the above.

5 Each of the distribution server 111, the client 112 and the agent server 113 comprises means for outputting the information treated with respective server. From the first embodiment, following effects can be obtained.

10 (1) Because the distributor can deliver the goods after confirming that the receiver or addressee stays at home, the possibility or chance to deliver it during her/his absence is reduced, thereby cutting back the delivery cost. (However, the delivery on absence cannot necessarily neglected to be zero because she/he sometimes goes out after
15 making the confirmation.)

20 (2) The purchaser can receive the purchased goods at an earlier timing at her/his home, by keeping her/himself for a moment from going outside for shopping, etc., since the date and time for delivery is clear for her/him in advance.

25 (3) In case that the purchaser does not come back home in the delivery time of the distributor for a several days, she/he can receive the goods in an earlier timing by using the agent (However, in this case, an assumption that the agent is doing business later than the distributor is

necessary).

(4) On the goods which has been kept for a several days in the agent since the purchaser forgot to receive it, a reminder can be given from the distributor or the agent to the purchaser to receive it, thereby dissolving the forgetting to receive by the purchaser in an earlier timing. Further, the purchaser can check if she/he forgets to receive the goods by her/himself, thereby she/he may go to the distributor or the agent to receive it, or change the delivery address to her/his home address.

Fig. 12 shows a functional construction diagram of a second embodiment of the present invention. The portions and/or elements to which the same reference numerals as the first embodiment are attached indicate the same procedures and/or information of the first embodiment. In the present embodiment, only a portion different from the first embodiment will be explained. A reference numeral 1211 indicates an assembly of the functions of the distributor servers in the second embodiment, and 1213 an assembly of the functions of the agent servers.

In the first embodiment, it is assumed that a human lies between in the delivery of goods conducted through the agent. Namely, a person who stays in the agent at any time make the confirmation of receipt of the goods from the distribution center, and she/he deliver the goods to the

resident of the delivery address. In the second embodiment,
for accomplishing an unmanned agent, the delivery locker
is provided in the agent. The delivery locker is an assembly
of boxes for conducting the delivery of goods, and is similar
5 to a coin-operated locker or storage in the shape which is
provided in a station, etc. In each of boxes, there is
provided an electronic key, a box open/close device to open
or release and close or lock the key thereof, and a box
observation device for affirming an existence of the goods
10 inside thereof.

Fig. 13 shows a hardware construction of the agent
server in the second embodiment.

Hereinafter, the detailed explanation will be given
with reference to Fig. 12.

15 In a step 1204, in addition to the information
outputted in the step 104 mentioned above, a condition for
storing the delivery goods in the delivery locker (i.e.,
size(s) or necessity of refrigeration of the goods, etc.)
is outputted by using the delivery goods information 1222.

20 In Fig. 14, only the differences between the delivery
goods information 122 already shown in Fig. 4 and the
delivery goods information 1222, with respect to respective
"contract code" are shown. As is apparent from this, the
delivery goods information 1222 is constructed by further
25 adding items or columns "size(s)" and "necessity of

refrigeration of the goods" to the items of the delivery goods information 122 shown in Fig. 4.

A step 1206 is a step, in which the information inputted from the input apparatus is registered into the commissioned goods information 125 and a locker information 127, thereby to notice the store-in to the distribution server and the client relating thereto. For the purpose of inputting, the bar-code or the IC-card as the conveyable medium which are produced in the step 1204 can be used.

10 An example of the locker information 1227 is shown in Fig. 15. The locker information comprises, other than "Box Number", various conditions for using the respective boxes, including "size(s)", "able to refrigerate ?" and so on. Further, there is provided a "contract code" column for
15 storing the contract code of the commissioned goods.

The detailed processing flow of the step 1206 will be given with reference to Fig. 16.

A step 1601 is a step for checking whether the electronic address of the distributor in the inputted
20 information is in the list of the distributors or not, by using a distributor information 1226. This step is executed for prohibiting the distributors other than those registered from their impermissible use or tricking thereof. However, if such operation is not to be intended, there is
25 no necessity of such the procedures mentioned above. An

example of the distributor information 1226 is shown in Fig.
17.

A step 1602 is a step for checking whether there is
a locker which satisfies the condition or not, with respect
5 to the delivery goods scheduled to be stored-in. For
example, in the case of the delivery goods of the contract
number "7281", the condition for store-in is such as the
reference numeral 1401 shows. Since there is a box
satisfying the condition in accordance with the locker
10 information 1501, a result of the checking is all right,
i.e., OK.

A step 1603 is a step, in which an instruction to open
or release the key is given to the open/close device of the
box which is detected to satisfy the condition in the step
15 1602. After this, the distributor opens the door of the box,
the key of which is opened to enter the delivery goods into
it, and then closes the door thereof.

A step 1604 is the step of checking whether the door
of the box, the key of which is opened, is closed or not.
20 In case that the door is closed, a notice thereof is given
from the box open/close device. A check is done depending
on the presence the notice.

A step 1605 is a step, in which an instruction to close
or lock the key is given to the open/close device of the
25 box, the door of which is closed.

A step 1606 is a step for checking whether there is the goods inside of the key-locked box or not. For that checking, the box observation device such as an infrared light sensor, etc. is used. If the result of the checking is OK, the process of the store-out of the step 106 (already explained in the first embodiment) is executed.

A step 1207 is a step, in which the date of the store-out is registered into the commissioned goods information 125 and the store-out is noticed to the distributor server and the client relating thereto. For the purpose of inputting, also the bar-code and/or the IC-card which are produced in the step 105 can be used.

The detailed processing flow of a step 1207 will be given with reference to Fig. 18.

A step 1801 is a step for checking whether the commissioned goods relating to the inputted contract code is stored in the locker or not. For example, as shown in Fig. 15, in case that the inputted contract code is "4293", since it coincides with contract code of the locker information 1502, the result of the checking is to be OK.

A step 1802 is a step, in which an instruction to open or release the key is given to the open/close device of the box in which the commissioned goods relating to the contract code is stored. For example, in case that the inputted contract code is "4293", the instruction of key-opening is

given to the locker open/close device having the box number "3" in the locker information 1502, as shown in Fig. 15.

After that, the purchaser opens the door of the box whose key is released to take out the purchased goods, and
5 then closed the door. Further, steps 1604, 1605 and 1606 are executed. In case that the result of the checking in the step 1606 is no good, i.e., NG, then, a step 1803 is executed.

The step 1803 is a step, in which the "contract code" column of the locker information of the locker is deleted,
10 from which locker the purchased goods is taken out. When the door is closed, a notice is given from the box open/close device. A checking is done depending on the presence of this notice.

15 In the second embodiment mentioned above, the distributor can store the delivery goods in the delivery locker and the purchaser can take out from that delivery locker. Thereby, dehumanization of the agent can be realized, and there is no time limit for the purchaser to
20 receive it through the agent. Therefore, it is possible for the purchaser to receive the goods in an earlier timing.

Fig. 19 shows a functional construction diagram of a third embodiment of the present invention. The portions and/or elements to which the same reference numerals as the
25 first embodiment are attached indicate the same procedures

and/or information of the first embodiment. A reference numeral 1911 indicates an assembly of the functions of the distributor servers in the third embodiment, and 113 an assembly of the functions of the agent servers. In the present embodiment, only a portion different from the first embodiment is explained.

In the first embodiment, the compiling function of the delivery information 121, the delivery goods information 122, and the schedule information 123 are treated as if they are out of the scope of the present invention, therefore, an influence to other servers due to deletion of those information is not taken into consideration. In the present embodiment, however, a total managing system for delivery goods will be explained, in which the influence due to the deletion of the delivery information and the schedule information is also taken into consideration.

The detailed explanation of the third embodiment will be given by referring to Fig. 19.

A step 1901 is a step for compiling the delivery information. The compile of the delivery information can be done at an arbitrary time point. If the delivery information is deleted, a step 1902 is called up.

The step 1902 is a step in which the deletion of the scheduled date and time of delivery is noticed to the client at the address for the delivery relating to the deleted

delivery information. For example, if the delivery information 301 shown in Fig. 3 is deleted, the delivery goods information 404 in Fig. 4 corresponding to the area name "Utsukushigaoka" and the delivery starting time
5 "960925(16)" is detected, and the deletion of the scheduled date and time for delivery of the delivery goods of the contract code "1001" in Fig. 4 is noticed to the electronic address "yamada@aaa.ccc" of the delivery address of the client.

10 After the notice of the deletion in the step 1902, the step 101 is executed on the basis of the delivery goods information which is deleted.

In a step 1903, receiving the notice of deletion of the scheduled date and time for delivery from the client,
15 the column of the scheduled date for delivery corresponding to the delivery goods information is made blank. For example, when receiving the notice of deletion of delivery of the contract code "1205", the column of the scheduled date for delivery of the delivery goods information 404 is
20 blanked, as shown in Fig. 4.

After the execution of the step 1903, the step 101 is executed with respect to the delivery goods information whose column of the scheduled date for delivery is blanked.

A step 1904 is a step in which the schedule information
25 is compiled. The compiling of the schedule information can

be done at an arbitrary time point. In case that the schedule information relating to receipt of the delivery goods is deleted, a step 1905 is called up.

In the step 1905, the column of "schedule" for delivery
5 of the purchased goods information relating to the deleted
schedule of receipt of the delivery goods is blanked, and
the deletion of the scheduled date and time for delivery
is noticed to the related distribution server. For example,
in case that the schedule 602 in Fig. 6 is deleted, the column
10 of the scheduled date of the purchased goods information
705 in Fig. 7, which has the scheduled date for delivery
coincident with the starting date and time of the schedule
602, is blanked, and the deletion of the scheduled date and
time of the contract code "1001" is noticed to "Distributor
15 A".

In a step 1906, receiving the notice of deletion of
the scheduled date and time for delivery from the
distribution server, the column of the scheduled date and
time of the corresponding purchased goods information is
20 blanked as well as the related schedule is deleted. For
example, when receiving the notice of deletion of delivery
of the contract code "1001", the scheduled date "960925(16)"
for delivery 704 in Fig. 7 is blanked, and the schedule
information 602 which has the same date and time as 704 in
25 the column of the starting date and time is deleted.

In a step 1907, receiving the notice from the client in the same manner as in the step 103 mentioned in the above, it is registered into the delivery goods information. However, sometimes the delivery information may be deleted
5 by the step 1901 mentioned above during the execution of the steps 101 and 102. Therefore, it is registered into the delivery goods information after confirming the existence of the scheduled date and time in the delivery information.

In accordance with the present embodiment, when the
10 purchaser deletes her/his schedule to receive the goods, it is automatically noticed to the distributor and a list of available date and time for delivery is transmitted from the distributor again. Therefore, the purchaser should not always be bound to the schedule for receiving the goods,
15 and she/he can re-adjust the schedule easily. Further, if the distributor deletes the schedule for delivery, it is automatically noticed to the purchaser, and a list of available date and time for delivery is transmitted from the distributor again for the purchaser to ensure the
20 schedule to receive it. Thereby, the distributor can reduce the influence on the purchaser as small as possible.

It is also possible to store the program for executing the procedures shown in Figs. 1, 12 and 19 into a portable storage medium, such as a floppy disk or an optical disk,
25 so as to be read into a main memory for execution thereof

in a personal computer system, etc.

With the delivery managing system of the present invention fully explained in the above has following effects:

5 (1) Because the distributor can distribute the delivery goods after confirming that the stay of the receiver or addressee at home, therefore, the possibility or chance of delivery in absence of the receiver or addressee is reduced, thereby reducing the cost for delivery. (However, 10 the delivery during absence of the resident cannot necessarily neglected to be zero because she/he sometimes goes out after making confirmation.)

 (2) The purchaser can receive the purchased goods at an earlier timing at her/his home, by keeping her/himself 15 for a moment from going outside for shopping, etc., since the date and time for delivery is clear for her/him in advance.

 (3) In case that the purchaser does not come back home in the delivery time of the distributor for a several days, 20 she/he can receive the goods in an earlier timing by using the agent (However, in this case the assumption is necessary that the agent is doing business later than the distributor. In case that the delivery locker is provided in the agent, since the dehumanization of the agent can be achieved, 25 realization of the above assumption becomes easier.).

(4) On the goods which has been kept for a several days in the agent since the purchaser forgot to receive it, a reminder can be given from the distributor or the agent to the purchaser to receive it, thereby dissolving the
5 forgetting to receive by the purchaser in an earlier timing. Further, the purchaser can check if she/he forgets to receive the goods by her/himself, thereby she/he may go to the distributor or the agent to receive or change the delivery address to her/his home address.

10 (5) When the purchaser deletes her/his schedule to receive the goods, it is automatically noticed to the distributor and a list of available date and time for delivery is transmitted from the distributor again. Therefore, the purchaser should not be always bound to the
15 schedule for receiving the goods, and she/he can re-adjust the schedule easily.

(6) If the distributor deletes the schedule for delivery, it is automatically noticed to the purchaser, and a list of available date and time for delivery is transmitted
20 from the distributor again, for the purchaser to ensure the schedule to receive. Thereby, the distributor can reduce an influence on the purchaser as small as possible.

What is Claimed:

1. A delivery managing system for managing delivery of a delivery goods from a distribution center through an agent to a receiver, comprising:

5 a client for providing at least a schedule information of the receiver;

a distribution server for providing at least a delivery schedule information and for managing delivery of the delivery goods;

10 an agent server for managing commission on the delivery goods by the agent;

a data transmission network, through which said client, said agent server and said distribution server are connected to one another;

15 means for determining date and time for delivery of the delivery goods, alternatively, for deciding the agent to be used, between said client and said distribution server; and

20 means for noticing of store-in and/or store-out of the delivery goods into and/or from the agent to at least one of said distribution server and said client.

2. A delivery managing system for managing delivery of a delivery goods from a distribution center through an agent to a receiver, comprising:

25 a client for providing at least a schedule information

of the receiver;

a distribution server for providing at least a delivery schedule information and for managing delivery of the delivery goods;

5 an agent server for managing commission on the delivery goods by the agent;

a data transmission network, through which said client, said agent server and said distribution server are connected to one another;

10 means for determining date and time for delivery of the delivery goods, alternatively, for deciding the agent to be used, among said client, said distribution server and said agent server; and

means for noticing of store-in and/or store-out of the delivery goods into and/or from the agent to at least one of said distribution server and said client.

3. A delivery managing system as defined in Claim 1 or 2, there is further provided means for managing information on the store-in and/or store-out of the delivery goods into and/or from the agent and detecting abnormality of the delivery goods in at least one of said distribution server and said client.

4. A delivery managing system for managing delivery of a delivery goods from a distribution center to a receiver, comprising:

a client for providing at least a schedule information
of the receiver;

a distribution server for providing at least a
delivery schedule information and for managing delivery of
5 the delivery goods;

a data transmission network, through which said client
and said distribution server are connected to each other;
and

means for determining date and time for delivery of
10 the delivery goods, alternatively, for deciding an agent
to be used between said distribution server and said client.

5. A delivery managing system for managing delivery
of a delivery goods from a distribution center to a receiver,
comprising:

15 a client for providing at least a schedule information
of the receiver;

a distribution server for providing at least a
delivery schedule information and for managing delivery of
the delivery goods;

20 a data transmission network, through which said client
and said distribution server are connected to each other;
and

means for determining date and time for delivery of
the delivery goods between said client and said distribution
25 server.

6. A delivery managing system for managing delivery of a delivery goods from a distribution center through an agent to a receiver, comprising:

a distribution server for providing at least a
5 delivery schedule information and for managing delivery of the delivery goods;

an agent server for managing commission on the delivery goods by the agent;

a data transmission network, through which said
10 distribution server and said agent server are connected to each other; and

means for noticing of store-in and/or store-out of the delivery goods into and/or from the agent, from said agent server to said distribution server or the receiver; and

15 means for managing information on the store-in and/or store-out of the delivery goods into and/or from the agent and detecting abnormality of the delivery goods, in said distribution server.

7. A delivery managing system as defined in Claim 1
20 or 2, wherein there is further provided means for outputting an delivery goods information, in at least one of said distribution server and said client, said distribution server includes means for noticing the delivery goods information to said agent server, and said agent server
25 includes means for reading out the delivery goods

information from said outputting means, and means for comparing the delivery goods information noticed from said distribution server with the delivery goods information read out by said reading out means.

5 8. A delivery managing system as defined in Claim 1, 2, 4 or 5, wherein said client further comprises:

means for compiling the schedule information;

means for noticing deletion of the schedule information for receiving the delivery goods to said
10 distribution server related thereto, responding the deletion thereof; and

means for deleting the related schedule information responding to a notice of deletion of the delivery schedule information from said distribution server; wherein said
15 distribution server further comprises:

means for deleting the delivery schedule information of the delivery goods responding to the notice of deletion of the schedule information for receiving the delivery goods from said client.

20 9. A delivery managing system as defined in Claim 1, 2, 4, 5 or 6, wherein said distribution server further comprises:

means for compiling the delivery schedule information; and

25 means for noticing deletion of the delivery schedule

information to all of said client relating the deletion thereof.

10. A delivery managing system as defined in Claim 1, 2 or 6, wherein said agent server further comprises:

5 a delivery locker having a plurality of boxes into which the delivery goods can be stored, each box thereof comprising at least means for observing thereof; and

means for deciding the store-in and/or store-out of the delivery goods into and/or from said agent by using the
10 observing means of said delivery locker.

11. A delivery managing system for managing delivery of a delivery goods from a distribution center through an agent to a receiver, comprising:

a client for providing at least a schedule information
15 of the receiver or an information of the agent to be used;

a distribution server for managing delivery of the delivery goods;

an agent server for managing commission on the delivery goods by the agent and having means for detecting
20 store-in and/or store-out of the delivery goods into and/or from the agent; and

a data transmission network, through which said client, said agent server and said distribution server are connected to one another; wherein said distribution server comprises:

25 means for providing a delivery schedule information

on delivery schedule and a delivery goods information on
a content of the delivery goods and for noticing of a list
of available delivery schedule information to said client
on the basis of the delivery schedule information and the
5 a delivery goods information;

means for setting date and time for delivery of the
delivery goods or the agent to be used into the delivery
schedule information responding to the schedule information
and the information of the agent to be used which are noticed
10 from said client;

means for setting a condition of the store-in into the
agent in the delivery goods information relating thereto,
responding to a notice of the store-in of the delivery goods
from said agent server;

15 means for setting a condition of the store-out from
the agent in the delivery goods information relating thereto,
responding to a notice of the store-out of the delivery goods
from said agent server;

means for outputting the delivery goods information
20 of the delivery goods to be delivered to the agent; and

means for detecting the delivery goods information of
the delivery goods in abnormal condition;

said client further comprises:

means for providing a schedule information and a
25 purchased goods information into which the contents of the

delivery goods and a criteria for use of the agent are described;

means for deciding to use the agent or not, on the basis of the list of the available delivery schedule information and the schedule information and the criteria for use of the agent of the purchased goods information from said distribution server, and for noticing of the date and time for delivery or the agent to be used to said distribution server, and for setting a receipt schedule of the delivery goods into the schedule information if it is decided not to use the agent;

means for setting the condition of the store-in into the agent in the purchased goods information of the delivery goods, responding to a notice of the store-in thereof from the agent server;

means for setting the condition of the store-out from the agent in the purchased goods information of the delivery goods, responding to a notice of the store-out thereof from the agent server;

means for outputting the purchased goods information of the delivery goods to be delivered to the agent server; and

said agent server further comprises:

means for providing a commissioned goods information relating to the delivery goods which are transferred from

the distribution center into the agent to be commissioned;

means for setting an information relating to the store-in of the delivery goods to be commissioned, into the commissioned goods information, and for noticing thereof
5 to said distribution server and said client relating thereto, responding to input of the store-in of the delivery goods to be commissioned; and

means for setting an information relating to the store-out of the delivery goods to be commissioned, into
10 the commissioned goods information, and for noticing thereof to said distribution server and said client relating thereto, responding to input of the store-out of the delivery goods to be commissioned.

12. A delivery managing system as described in Claim
15 11, wherein said agent server further comprises:

a delivery locker for common use, which comprises a plurality boxes, and box open/close devices and box observation devices for each box thereof;

means for providing the commissioned goods
20 information relating to the delivery goods transferred from the distribution center, and a locker information having at least a size of each box and an identification number of the delivery goods stored therein;

means, in response to input of the information
25 relating to the store-in of the delivery goods to be

commissioned, for searching a box satisfying a condition
for storing the delivery goods to be commissioned,

means for instructing releasing of key to the
open/close device of the box which is searched out;

5 means for instructing locking of the key of the
open/close device when a door of the box is closed again;

means for setting the store-in information to the
commissioned goods information;

10 means for setting an identification code of the
delivery goods to be commissioned into the locker
information relating to the box into which the delivery goods
is stored; and

means for noticing of the store-in of the delivery
goods to be commissioned to said distribution server and
15 said client related thereto;

means, in response to input of the identification code
of the delivery goods to be commissioned;

means for instructing releasing of the key to the box
open/close device of the box which is coincident with the
20 identification code;

means for instructing locking of the key to the box
open/close device when the door of the box is closed again;

means for setting the store-out of the delivery goods
to be commissioned, into the locker information and the
25 commissioned goods information; and

means for noticing of the store-in of the delivery goods to be commissioned to said distribution server and said agent server related thereto.

13. A delivery managing system for managing delivery
5 of a delivery goods from a distribution center through an agent to a receiver, comprising:

a client for providing at least a requirement for receiving the delivery goods by the receiver;

a distribution server providing at least a delivery
10 schedule information and for managing delivery of the delivery goods;

an agent server for managing commission on the delivery goods by the agent; and

a data transmission network, through which said client,
15 said agent server and said distribution server are connected to one another.

14. A delivery managing system for managing delivery of a delivery goods from a distribution center through a agent to a receiver, comprising:

20 a client for providing at least a requirement for receiving the delivery goods by the receiver;

a distribution server providing at least a delivery schedule information and for managing delivery of the delivery goods;

25 an agent server for managing commission on the

delivery goods by the agent; and

a data transmission network, through which said client, said agent server and said distribution server are connected to one another, wherein a conveyable memory medium is used
5 for communicating between said client and said agent server, on which an information relating to the delivery and the receipt on the delivery goods is outputted.

15. A delivery managing system for managing delivery of a delivery goods from a distribution center through an
10 agent to a receiver, comprising:

a client for providing at least an order for receiving the delivery goods by the receiver;

a distribution server providing at least a delivery schedule information and for managing delivery of the
15 delivery goods;

an agent server for managing commission on the delivery goods by the agent; and

a data transmission network, through which said client, said agent server and said distribution server are connected
20 to one another, wherein said distribution server sends back an identification information corresponding to the order from said client to said client for certifying that an addressee of the delivery goods is to be said client when it is sent thereto, and outputs said identification number
25 into a memory medium, which is attached onto said delivery

goods.

16. A delivery managing system for managing delivery of a delivery goods from a distribution center through a agent to a receiver, comprising:

5 a client for providing at least an order for receiving the delivery goods by the receiver;

a distribution server providing at least a delivery schedule information and for managing delivery of the delivery goods;

10 an agent server for managing commission on the delivery goods by the agent; and

a data transmission network, through which said client, said agent server and said distribution server are connected to one another, wherein said distribution server sends back
15 an identification information corresponding to the order from said client to said client as well as to said agent server depending on the order from said client or a shape of the delivery goods, and said agent server checks said identification information read from said client into a
20 memory medium with the identification information from said distribution server when the goods is delivered.

17. A product program for use with a computer-aided delivery managing system for managing delivery of a delivery goods from a distribution center through an agent to a
25 receiver, said system including at least a client, an agent

server and a distribution server, which are connected to one another through a data transmission network, comprising:

a client source code segment for providing at least
5 a schedule information of the receiver;

a distribution server source code segment for providing at least a delivery schedule information and for managing delivery of the delivery goods; and

an agent server source code segment for managing
10 commission on the delivery goods by the agent, wherein at least one of said client source code segment and said distribution server source code segment includes:

a source code segment for determining date and time for delivery of the delivery goods, alternatively, for
15 deciding the agent to be used, between said client and said distribution server, and said agent server source code segment includes:

a source code segment for noticing of store-in and/or store-out of the delivery goods into and/or from the agent
20 to at least one of said distribution server and said client.

18. A product program for use with a computer-aided delivery managing system for managing delivery of a delivery goods from a distribution center through an agent to a receiver, said system including at least a client and a
25 distribution server, which are connected to each other

through a data transmission network, comprising:

a client source code segment for providing at least a schedule information of the receiver; and

a distribution server source code segment for
5 providing at least a delivery schedule information and for
managing delivery of the delivery goods, wherein at least
one of said client source code segment and said distribution
server source code segment includes:

a source code segment for determining date and time
10 for delivery of the delivery goods between said client and
said distribution server.

19. A product program for use with a computer-aided
delivery managing system as defined in 17 or 18, wherein
at least one of said client source code segment and said
15 distribution server source code segment further comprises
a source code segment of said informations in said client
and said distributor server.

20. A product program for use with a computer-aided
delivery managing system for managing delivery of a delivery
20 goods from a distribution center through an agent to a
receiver, said system including at least an agent server
and a distribution server, which are connected to each other
through a data transmission network, comprising:

a distribution server source code segment for
25 providing at least a delivery schedule information and for

managing delivery of the delivery goods; and

an agent server source code segment for managing commission on the delivery goods by the agent, wherein said agent server source code segment comprises:

5 a source code segment for noticing of store-in and/or store-out of the delivery goods into and/or from the agent, from said agent server to said distribution server or the receiver; and

10 a source code segment for managing information on the store-in and/or store-out of the delivery goods into and/or from the agent and detecting abnormality of the delivery goods, in said distribution server.

21. A product program for use with a computer-aided delivery managing system as defined in 20, wherein said
15 distribution server source code segment further comprises a source code segment of said information in said distributor server.

ABSTRACT OF DISCLOSURE

A delivery managing system for managing delivery of
a delivery goods from a distribution center through an agent
5 to a receiver, comprising:

a client for providing at least a schedule information
of the receiver;

a distribution server for providing at least a
delivery schedule information and for managing delivery of
10 the delivery goods;

an agent server for managing commission on the
delivery goods by the agent;

a data transmission network, through which said client,
said agent server and said distribution server are connected
15 to one another;

means for determining date and time for delivery of
the delivery goods, alternatively, for deciding the agent
to be used, between said client and said distribution server;
and

20 means for noticing of store-in and/or store-out of the
delivery goods into and/or from the agent to at least one
of said distribution server and said client.

FIG. 1

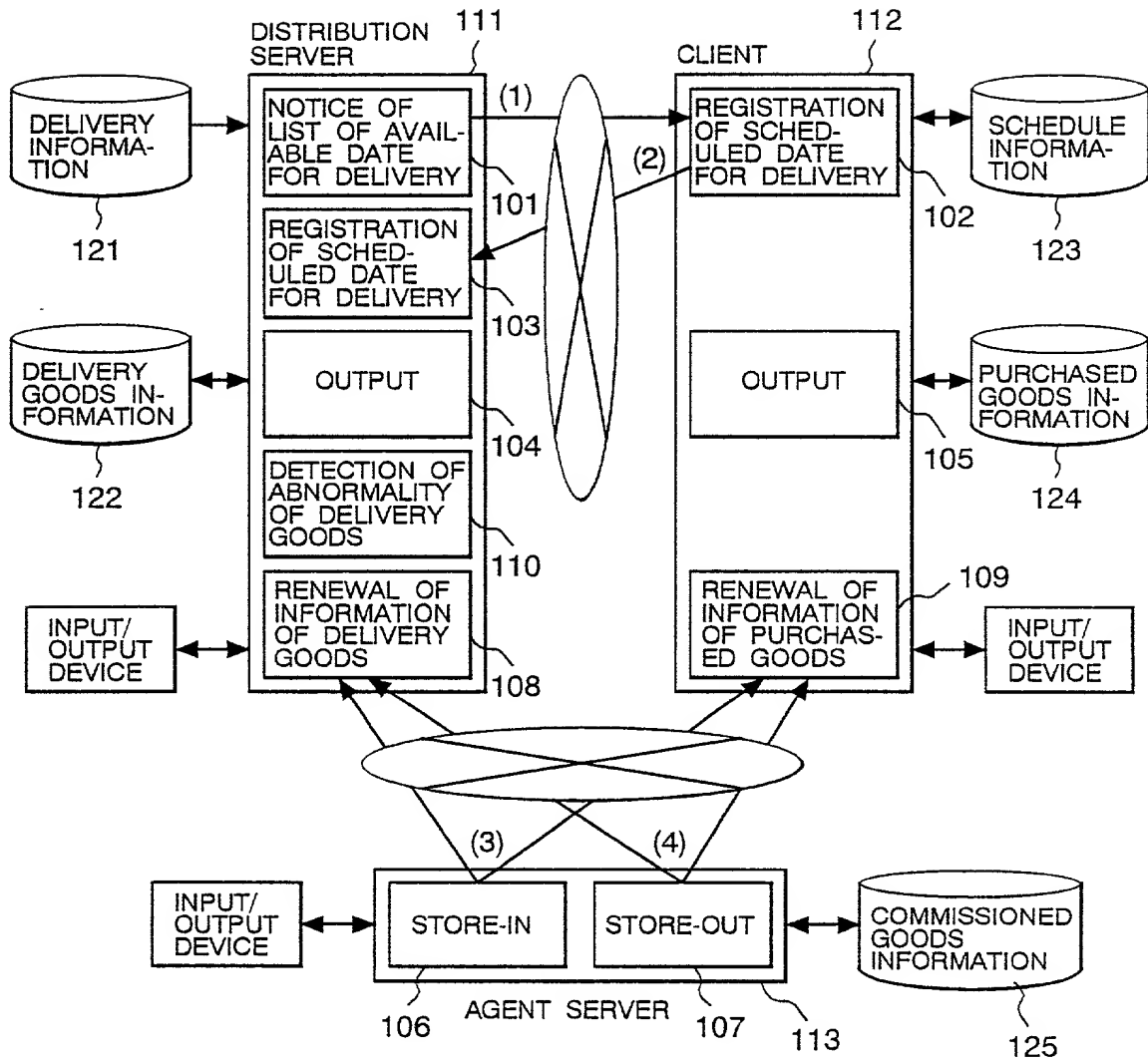
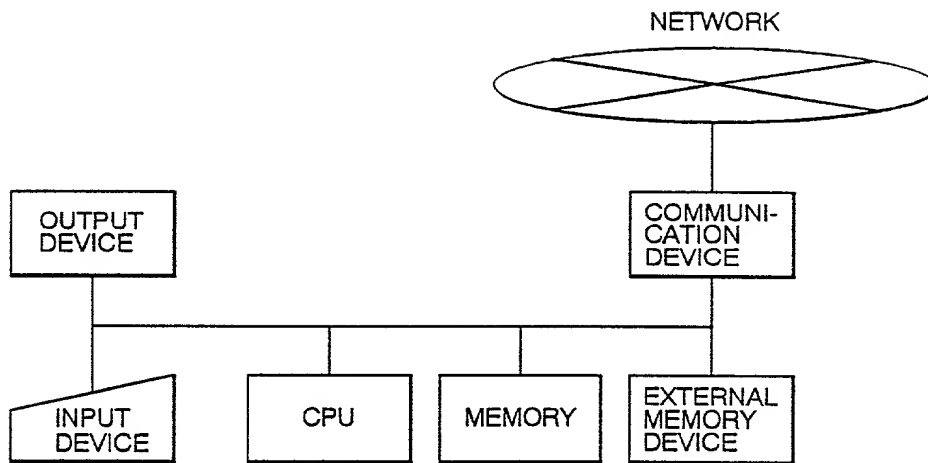
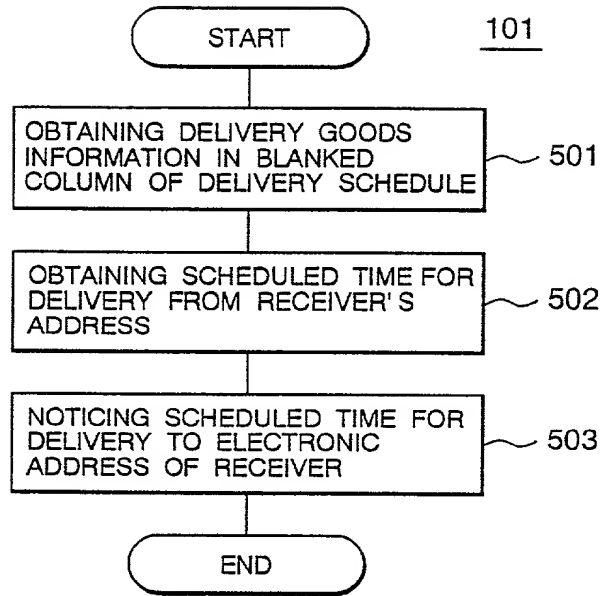


FIG. 2**FIG. 3**

AREA NAME	STARTING DATE AND TIME FOR DELIVERY	COMPLETION DATE AND TIME FOR DELIVERY	121
Utsukushigaoka	960924 (16)	960924 (18)	301
Utsukushigaoka	960925 (16)	960925 (18)	302
Azamino	960924 (10)	960924 (12)	

3/15

	CONTRACT CODE	RECEIVER ADDRESS	DELIVERY GOODS	ARRIVAL DATE OF DELIVERY GOODS	SCHEDULED DATE FOR DELIVERY	ELECTRONIC ADDRESS OF RECEIVER	CONDITION OF DELIVERY
413 {	1001	Utsukushigaoka Nishi 2-4-1	CLOCK	960922 (15)		tsukuda@aaa. bbb	
	1205	Utsukushigaoka Higashi 3-2-10	PC	960923 (15)	960924 (16)	yamada@aaa. ccc	
	7281	Azaminno Minami 4-4	BAG	960923 (15)	X AGENT	eguchi@aaa. ccc	AGENT
411 {							

FIG. 5**FIG. 6**

STARTING DATE / TIME	COMPLETING DATE / TIME	PLACE	CONTENTS	123
960924 (9)	960924 (18)	Kashimada	BUSINESS	601
960925 (11)	960925 (14)	Shibuya	WEDDING PARTY OF FRIEND	
960925 (16)	960925 (18)	Own House	RECEIPT OF DELIVERY	602

FIG. 7

701		702		703	
				124	
CONTRACT CODE	PURCHASED GOODS	STANDARD FOR USE OF AGENCY	AGENT TO BE USED	SCHEDULED DATE FOR DELIVERY	PLACE OF STORAGE
1001	CLOCK	5 DAYS PASSED	X AGENT	960925 (16)	A DIS-TRIBUTOR
2529	BOOK	3 DAYS PASSED	X AGENT		X AGENT
3795	VERSE	NOT USED			

704

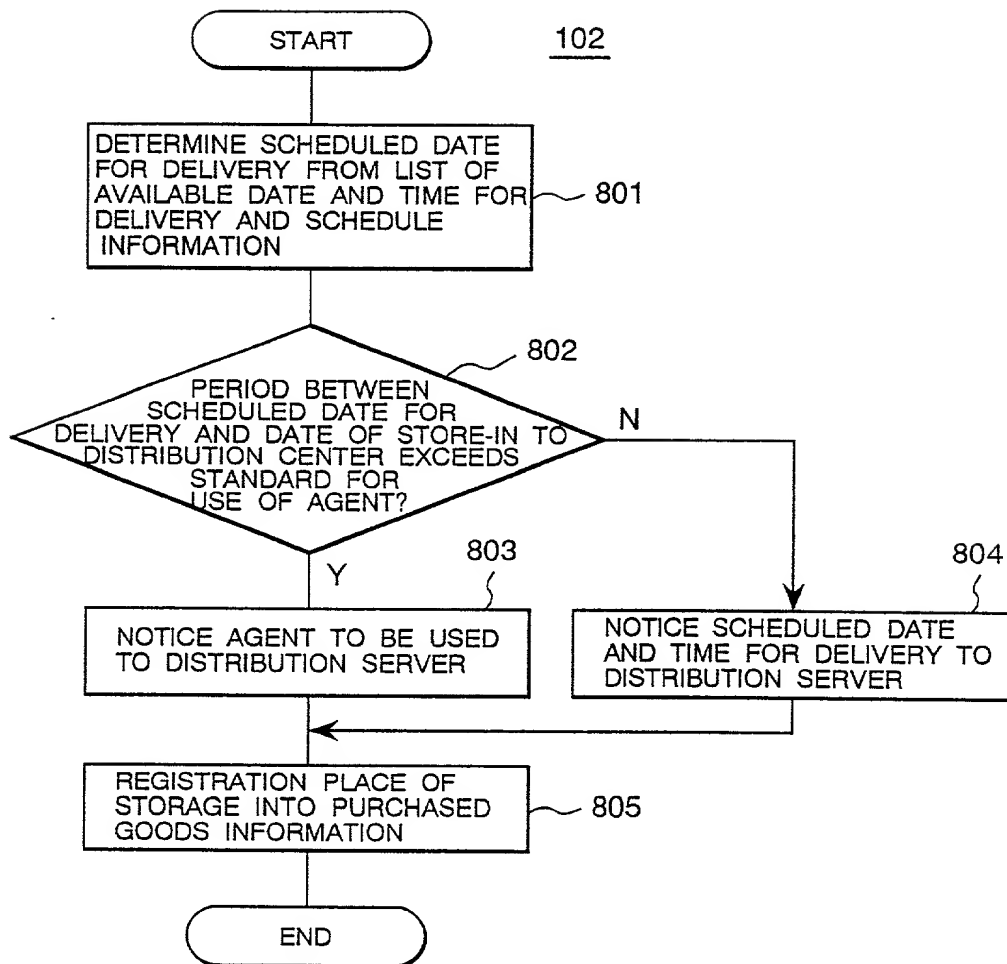
FIG. 8

FIG. 9 is a schematic diagram of a system 900 for managing a supply chain. The system 900 includes a server 910, a database 920, and a network 930. The server 910 is connected to the database 920 and the network 930. The database 920 stores data related to the supply chain. The network 930 connects the server 910 to various devices 940, which can be used by users to interact with the system 900.

FIG. 9

125

CONTRACT CODE	PURCHASED GOODS	DAY OF STORE-IN	DAY OF STORE-OUT	ELECTRONIC ADDRESS OF DISTRIBUTOR	ELECTRONIC ADDRESS OF PURCHASER
2529	BOOK	960916		info@a - butu. co	tsukuda@aaa. bbb
4293	CLOTHES	960924		info@a - butu. co	yamada@aaa. ccc
7281	BAG	960914	960919	info@a - butu. co	

901

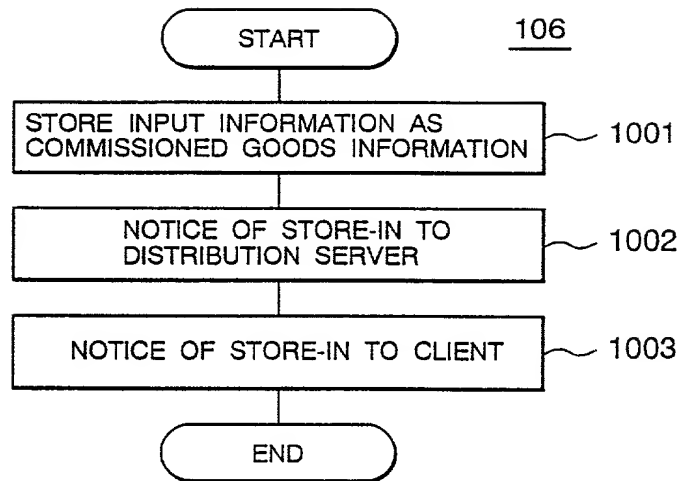
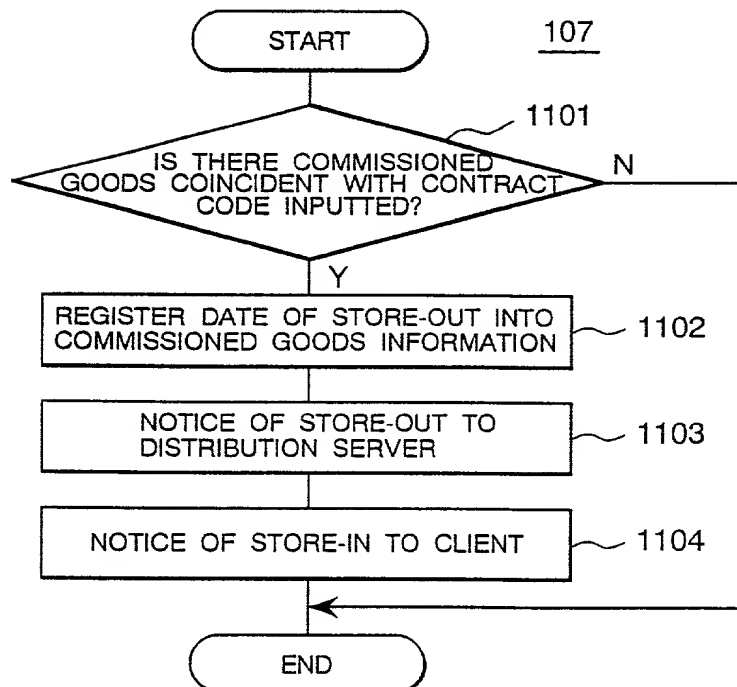
FIG. 10**FIG. 11**

FIG. 12

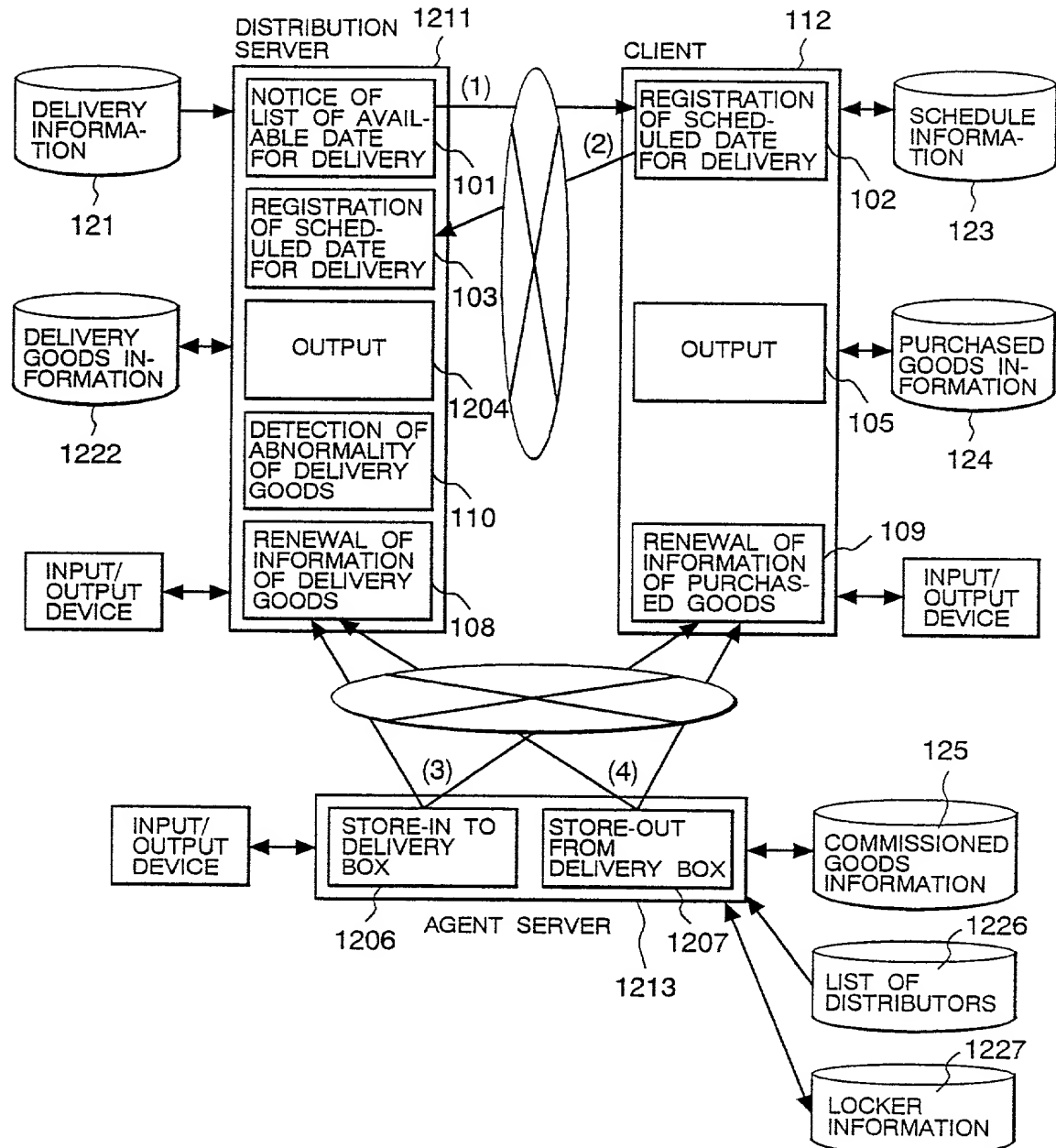
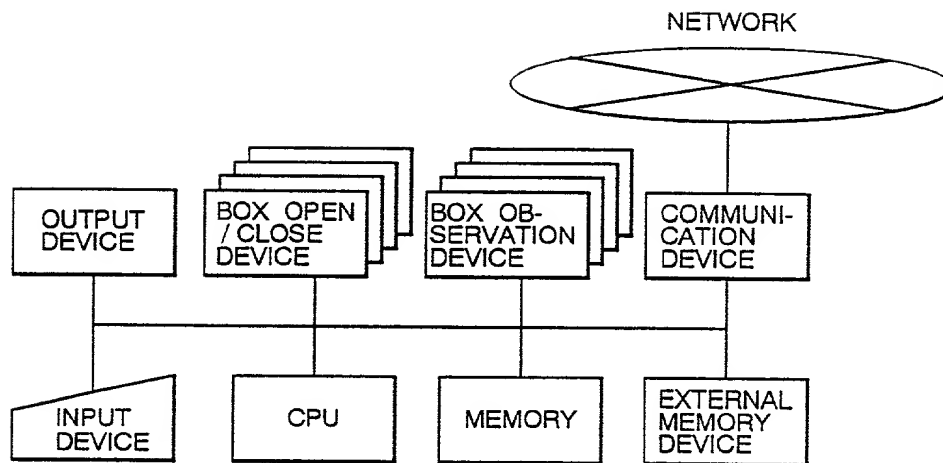


FIG. 13**FIG. 14**

CONTRACT CODE	SIZE (S)	NECESSITY OF REFRIGERATION
1001	10 * 10 * 10	NOT NECESSARY
1205	50 * 50 * 30	NOT NECESSARY
7281	30 * 30 * 30	NOT NECESSARY

1222

1401

FIG. 15

1227

BOX NUMBER	SIZE (S)	IS REFRIGERATION POSSIBLE ?	CONTRACT CODE
1	30 * 40 * 10	IMPOSSIBLE	
2	50 * 50 * 50	IMPOSSIBLE	
3	30 * 30 * 30	POSSIBLE	4293

1501

1502

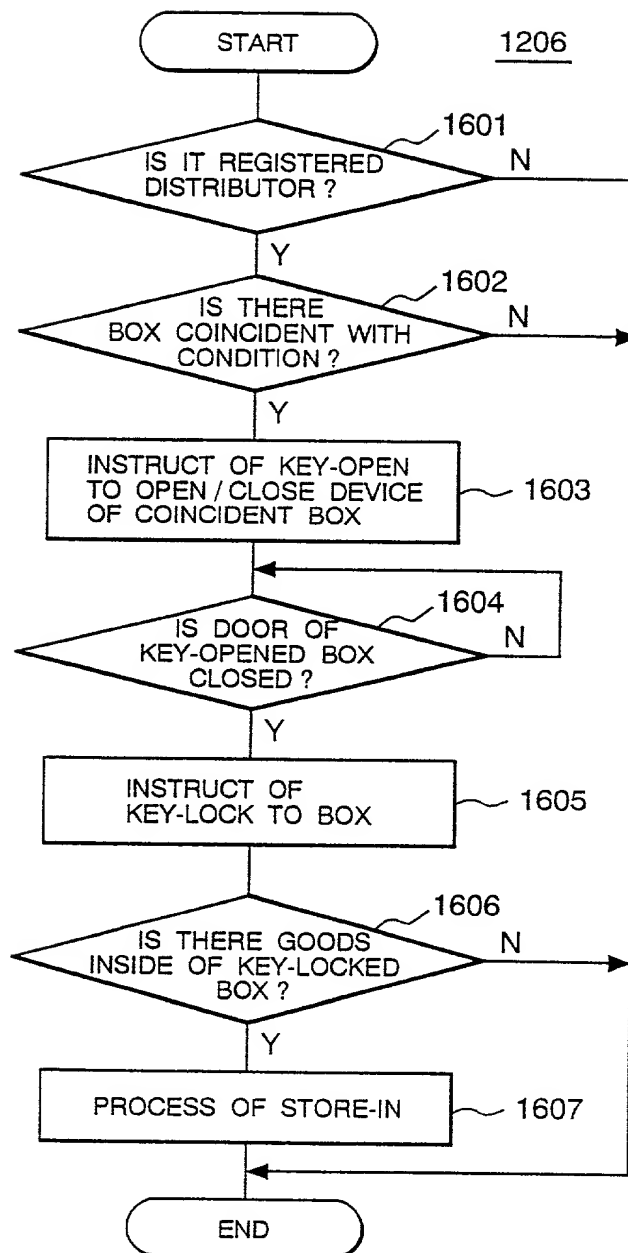
FIG. 16

FIG. 171226

ELECTRONIC ADDRESS FOR RESPECTIVE DISTRIBUTORS
info@a - butu. co
xxx@b - butu. co
yyy@buturyuu -ccc. co

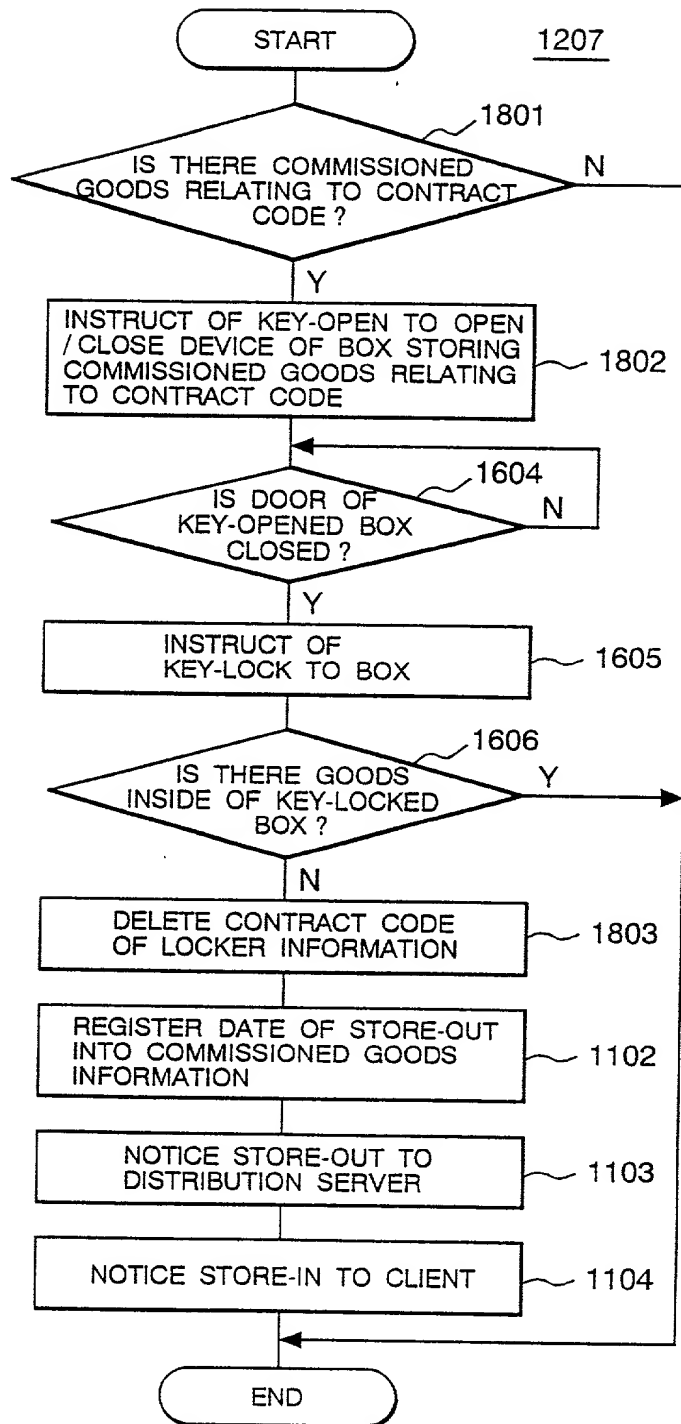
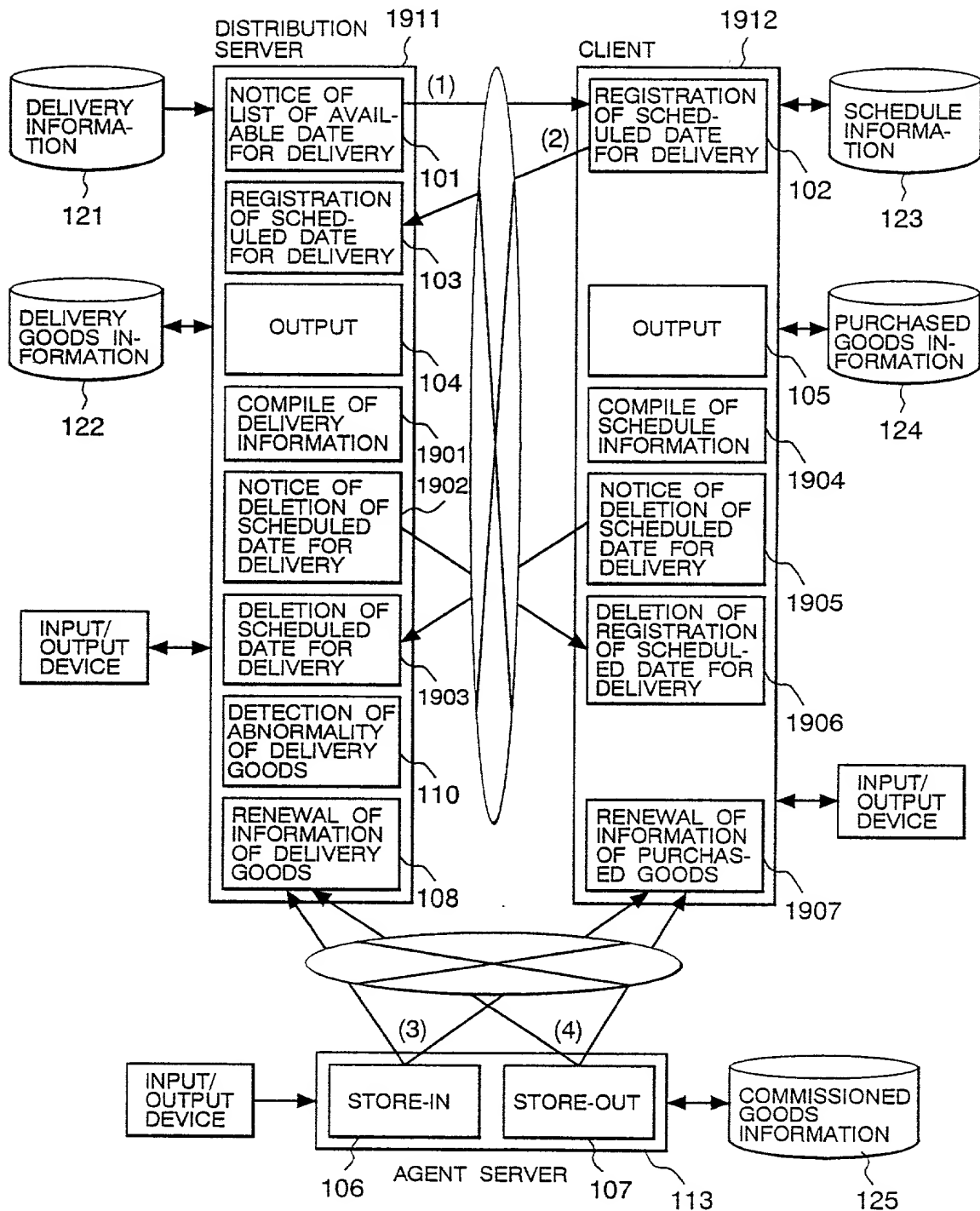
FIG. 18

FIG. 19



COMBINED DECLARATION AND POWER OF ATTORNEY

(宣誓書及び委任状)

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below next to my name, I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

A DELIVERY MANAGING SYSTEM

the specification of which: (check one) ☒ is attached hereto.

☐ was filed on _____
as Application Serial No. _____
and was amended on _____
(if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended, by any amendment referred to above.

I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me which is material to patentability in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119 of any foreign application(s) for patent or inventor's certificate listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date earlier than that of the application(s) on which priority is claimed:

Prior Foreign Application(s)

Priority Claimed

<u>8-317438</u> (Number)	<u>Japan</u> (Country)	<u>28/Nov./1996</u> (Day/Month/Year Filed)	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No
_____ (Number)	_____ (Country)	_____ (Day/Month/Year Filed)	<input type="checkbox"/> Yes	<input type="checkbox"/> No

I hereby claim the benefit under Title 35, United States Code, 120 of any United States application(s) or PCT international application(s) designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose to the United States Patent and Trademark Office all information known to me to be material to patentability as defined in Title 37, Code of Federal Regulations, § 1.56 which became available between the filing date of the prior application and the national or PCT international filing date of this application:

<u> </u> (Application Serial No.)	<u> </u> (Filing Date)	<u> </u> (Status) (patented, pending, abandoned)
<u> </u> (Application Serial No.)	<u> </u> (Filing Date)	<u> </u> (Status) (patented, pending, abandoned)

(Continued on Page 2)

I hereby appoint the following attorneys/agents to prosecute this application and transact all business in the Patent and Trademark Office connected therewith and with any divisional, continuation, continuation-in-part, reissue or re-examination application with full power of appointment and substitution of associate attorneys and agents, and to receive all patents which may issue thereon: Thomas E. Beall, Jr., Reg. No. 22,410; Michael J. Colitz, Reg. No. 37,010; Joseph D. Dreher, Reg. No. 37,123; Christopher B. Fagan, Reg. No. 22,987; Jude A. Fry, Reg. No. 33,340; John X. Garred, Reg. No. 31,330; Michael E. Hudzinski, Reg. No. 34,135; Jeffrey M. Ketchum, Reg. No. 31,174; Richard M. Klein, Reg. No. 33,000; Thomas E. Kocovsky, Jr., Reg. No. 23,383; Sandra M. Koenig, Reg. No. 33,722; Petar Kraguljac, Reg. No. 33,520; Scott A. McCollister, Reg. No. 33,961; James W. McKee, Reg. No. 26,482; Shrinath Malur, Reg. No. 34,663; John R. Mattingly, Reg. No. 30,293; Richard J. Minnich, Reg. No. 24,175; Jay F. Moldovanyi, Reg. No. 29,673; Philip J. Moy, Reg. No. 31,280; Timothy E. Nauman, Reg. No. 32,283; Sue Ellen Phillips, Reg. No. 32,046; Patrick R. Roche, Reg. No. 29,580; Alan J. Ross, Reg. No. 33,767; Albert P. Sharpe, III, Reg. No. 19,379; Daniel J. Stanger, Reg. No. 32,346; Eric A. Stephenson, Reg. No. 33,321; Mark S. Svat, Reg. No. 34,261; John C. Tiernan, Reg. No. 21,073; John M. Vasuta, Reg. No. 33,353. Address all correspondence to: FAY, SHARPE, BEALL, FAGAN, MINNICH & MCKEE

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I declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further, that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Title 18, United States Code, Section 1001, and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

発 明 日

発 明 の フ ル ネ ー ム サ イ ン

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